

Epitrix australis Bryant.

While collecting *Cyrtopeltis* from *Drosera pallida* in September, 1952, it was noticed that the white petals of the plant were being eaten by the black beetle, *Epitrix australis*, described in this number by Mr. Bryant. Although damage to *D. pallida* was extensive adjacent specimens of *D. macrantha* were untouched.

Scorpion Fly, *Harpabittacus australis*.

This predator has been seen more than once feeding on small insects caught on the leaves of *D. pallida*. Its long, unusually prehensile legs enable it to grasp the stem and petioles of the Sundew, keeping its body clear of the leaf. This is obviously a casual commensalism not without danger to *Harpabittacus*.

BIRD-LIFE AT CARON

By E. H. SEDGWICK, Government School, Wooroloo.

THE ENVIRONMENT

Caron is situated in the wheat-belt, 168 miles to the north and slightly east of Perth.

During 1947 13 in. of rain were recorded, but 1948 was much drier. Exact figures for 1948 are not available because the official rain gauge was damaged by a storm early in the year. Winters were mild but periods of extreme heat were experienced in summer.

Native vegetation is of the scrub-plain type and comprises dense thickets of *Acacia* and *Casuarina* in parts. Other areas which have apparently been cleared and then allowed to revert, or which have, perhaps, been swept by fire, are less densely vegetated and produce a great variety of shrubs including *Acacia*, *Casuarina*, *Hakea*, *Grevillea*, *Verticordia* and *Calothamnus*. There are occasional mallee (*Eucalyptus* sp.) thickets and scattered groups of *Callitris*.

The Railway Dam catchment area was situated in a "break-away," the floor of which supported York Gum (*Euc. foecunda*) and more nearly approached forest than any other locality in the study area. This catchment area was rich in bird-life and a favoured resort for breeding birds. Pools sometimes remained in the catchment channels for some time after rain, but the dam itself, being entirely roofed, had little influence upon bird-life.

Most arable land was at some distance from the siding, and comparatively little of the land adjacent to the townsite was under cultivation.

SCOPE OF OBSERVATIONS

Observations were made largely within two miles of the townsite during the years 1947 and 1948.

NOTES ON INDIVIDUAL SPECIES

At the time of leaving Caron I did not propose publishing an annotated bird-list for the area, hence a number of observations

have been published as short notes in the *Western Australian Naturalist*. There appears, however, to be a case for a comprehensive list, so the following notes on the 76 species observed are placed on record:—

Emu (*Dromaius novae-hollandiae*).—I saw only a few Emus myself, but reliable reports indicate that the birds are numerous, at times, in many parts of the district and that they cause damage in wheat crops. This damage is caused by the progress of flocks through the crops and is not a direct consequence of feeding. During both 1947 and 1948, breeding appears to have been well advanced by the end of July.

Mallee Fowl (*Leipoa ocellata*).—Reports show that the species has decreased rapidly before the spread of settlement and that birds are now only sparingly encountered. I located a probable old nest and found the plumage of a bird killed, probably by a fox, but did not encounter birds in the flesh. I have reason to believe that eggs were taken from a nest in October, 1947.

Little Quail (*Turnix vclox*).—I once flushed a small covey of quail from low heathland. These were not positively identified. An egg picked up in the same locality in July 1947 was identified by Dr. D. L. Serventy as that of a Little Quail. The egg was empty when found, the contents having apparently been lost through a small opening in one side.

Common Bronzewing (*Phaps chalcoptera*).—Cultivation reverting to heathland appears more favourable to this species than the less open types of heathland. Birds were encountered at all seasons.

Crested Pigeon (*Ocyphaps lophotes*).—These pigeons could usually be observed on the townsite, water, no doubt, being an attraction, though the rail yard provided grain in plenty. These birds display frequently, both on the ground and perched in trees. In a number of displays noted, there were differences in detail but the displaying bird invariably indulged in a bowing with wings drooped and tail spread and usually uttered a "woo-woo-woo" call meanwhile. In two instances the bird bowing appeared larger than the bird to which it was displaying. In one instance the bird approached crouched slightly with head, body and tail parallel to the ground and erect only semi-erect. I am not clear as to the function of these displays. They were noted mainly in spring and summer. My only breeding evidence is a reported nesting in July 1948.

Banded Plover (*Zonijer tricolor*).—This species occurs mainly on the cultivated areas. Though these are not confiding birds, I found individuals sheltering under the school and under the house during the excessively hot weather of early February 1947. Shade temperature at the time of one of these observations was 116° F.

Australian Dotterel (*Pellonyas australis*).—See *W.A. Nat.*, vol. 2, p. 195 for record of breeding.

White-headed Stilt (*Himantopus leucocephalus*).—Though I received frequent reports of this species on the Bunjil lakes, I encountered it only once—a single bird at a temporary pool near Perenjori.

Australian Bustard (*Eupodotis australis*).—These birds were reported occasionally. Evidence of their presence in the district was provided by feathers, some from a supposed fox-kill and one found singly in a paddock.

White-faced Heron (*Notophoxyx novae-hollandiae*).—I saw only one individual, but this is not surprising as I had little opportunity of observing suitable habitats. A bird seen by my son, Lindsay, at a silt trap above the Railway Dam appears to have been a White-necked Heron (*N. pacifica*).

Chestnut-breasted Shelduck (*Casarca tadornoides*).—These birds apparently occurred on the Bunjil lakes: I inspected plumage from a bird shot as game.

Collared Sparrow-hawk (*Accipiter cirrocephalus*).—An *Accipiter* seen on March 2, 1947 was identified with reasonable certainty as being of this species.

Australian Goshawk (*Accipiter fasciatus*).—A pair of these birds was seen in York Gum forest on September 5, 1948.

Little Falcon (*Falco longipennis*).—Individuals were seen on several occasions and a dead bird, shot locally, was brought to me for identification. Length, 13.25 in.; wing, 10.5 in.

Brown Hawk (*Falco berigora*).—This proved one of the more frequent birds of prey, occasional individuals being noted throughout the year.

Nankeen Kestrel (*Falco cenchroides*).—Kestrels proved to be the most plentiful of the birds of prey, though they were present only during the late winter and the summer months. Breeding took place during September and October.

Boobook Owl (*Ninox novae-seelandiae*).—Calls were heard on several occasions.

Red-tailed Black Cockatoo (*Calyptrorhynchus banksii*).—Flocks of up to 60 birds were noted in passage at all seasons.

Pink Cockatoo (*Kakatoe leadbeateri*).—See *W.A. Nat.*, vol. 2, p. 143 for note regarding status.

Corella (*Kakatoe tenuirostris*).—I found it impossible to identify with certainty any of the flocks of Corellas which I saw in this district. Of four captive birds, possessed by three different owners and all said to have been captured locally, three were *K. tenuirostris*, but the fourth more nearly resembled *K. sanguinea*.

Galah (*Kakatoe roseicapilla*).—This is perhaps the most conspicuous bird of the district and the species is one which does actually occur in large numbers, flocks of up to two hundred birds being common. Twice, once in May 1947 and once in June 1948, I saw a large bird of prey, which remained unidentified on each occasion, harried by a flock of perhaps 100 Galahs. Breeding in

the Caron district appears to take place in August, September and October.

Regent Parrot (*Polytelis anthopeplus*).—I did not record this species until May 15, 1947. Thereafter I saw flocks fairly frequently until August 1947. A few birds were seen in November 1947 but it was not until late March 1948 that the species was again represented in numbers.

Port Lincoln Parrot (*Barnardius zonarius*).—These birds were plentiful and well distributed. Birds were observed nibbling fruits of York Gum and apparently eating the seeds. Seeds of a Cape Lilae (*Melia azedarach*) proved a great attraction.

Mulga Parrot (*Psephotus varius*).—This species, like the foregoing, appeared to favour the townsite, water, food scraps, wheat in the rail yard, and the cleared areas, perhaps, proving attractions. Flocks of up to 17 birds were noted. The sex ratio in all parties noted was invariably as evenly balanced as possible, it being assumed that all the duller plumaged birds were hens. See *W.A. Nat.*, vol. 2, p. 144, for account of Mulga Parrot striking at a window.

Tawny Frogmouth (*Podargus strigoides*).—A nest with two eggs was located on August 2, 1947. This was kept under intermittent observation. Both eggs hatched, but on October 12 there was only one young bird in the nest. A second nest was found partly constructed on August 22, 1948. A bird was sitting on August 29 and again on August 31, but when I next visited the nest on September 6, the nest was on the ground with the remains of one—perhaps two—eggs. The use of green nesting material in this nest has already been recorded (*W.A. Nat.*, vol. 1, p. 152). Both nests were in York Gums. One bird, apparently injured, was noted resting on the ground in open heathland. All other records were made in open forest, or on the townsite where there were some trees.

Owl Nightjar (*Aegotheles cristata*).—On July 28, 1948, I was given several breast feathers and three primaries of a bird described as "a small but apparently fully-grown owl" which had fallen down a chimney late the previous evening. The feathers were those of an Owlet Nightjar.

Spotted Nightjar (*Eurostopodus guttatus*).—On August 29, 1948, I thrice flushed a nightjar from a stony ridge in breakaway country. On one occasion in particular, the bird was seen very plainly. Later searches for birds or nest in the same area proved fruitless, though two birds flushed on September 5 from the limits of the area searched might well have been nightjars.

Fork-tailed Swift (*Micropus pacificus*).—One flock only was noted. This occurrence was reported in some detail in the *W.A. Nat.*, vol. 2, p. 141.

Pallid Cuckoo (*Cuculus pallidus*).—Present from July 4 until mid-September, 1947 and from July 27 to mid-September, 1948.

Black-eared Cuckoo (*Misocalius osculans*).—I first noted this species at Caron on August 3, 1947 on the Railway Dam catch-

ment area. I re-visited this area on several occasions and was always able to locate the bird until September 6. However, on September 21 I heard a bird calling near Bunjil Rocks. On August 1, 1948, I heard a cuckoo calling in the old locality at Caron, but could not again locate the bird until August 31, after which it was not seen or heard. The 1947 bird was always seen in a very restricted area—about 2.7 acres—but the 1948 bird on the two occasions that it was encountered seemed restless and unsettled. Redthroats were fairly frequently in the area occupied by these cuckoos.

Horsfield Bronze-Cuckoo (*Chalcites basalis*).—These cuckoos were present and calling from June 22 until September 1947 and from July 25 until September 1948. However, Brown Thornbills were noted feeding a young cuckoo on November 7, 1948.

Welcome Swallow (*Hirundo neoxena*).—Present in fluctuating numbers over the railway, about the townsite and at the Railway Dam. Birds were observed entering buildings, as though seeking nesting sites, late in July, building nests during August, feeding young in mid-September and sitting on a second clutch in mid-November.

White-backed Swallow (*Cheramoecca leucosterna*).—Flocks of up to 15 birds were noted from time to time during all months except December, January, February and March. Attempts at nesting were observed in September 1948.

Tree Martin (*Hylochelidon nigricans*).—Flocks numbering to between 100 and 200 birds were noted at various times, usually over the townsite. Nest building was observed in late August.

Black and White Fantail (*Rhipidura leucophrys*).—A few pairs were located. Occupied nests were noted in August (first brood), September and October (second brood) and November (third brood). A nest said to have been blown down from under the roof of the Railway Dam was 3.5 in. in diameter and 4.75 in. outside depth. From its appearance I should say that additions had been made five times, i.e., that the nest had been used six times.

Red-eapped Robin (*Petroica goodenovii*).—Robins were not very frequent. Most of my records were made on the Railway Dam catchment.

Hooded Robin (*Melanodryas cucullata*).—This species was recorded only once—a cock bird perching on shrubs at the edge of a cultivation reverting to heathland. A bird which may have been a hen was present, but was not definitely identified.

Golden Whistler (*Pachycephala pectoralis*).—This species proved rather infrequent. It was noted thrice in March 1948—twice in the same locality—and once in July 1948. The presence of *P. inornata* was suspected, but a satisfactory identification was not made.

Rufous Whistler (*Pachycephala rufiventris*).—This species was more frequent than the foregoing, occurring mainly on the Railway Dam catchment.

Western Shrike-Thrush (*Colluricincla rufiventris*).—Though silent and inconspicuous during the summer and autumn months, i.e. from November until late June, the birds were, at other times, vocal and easily located.

Magpie Lark (*Grallina cyanoluca*).—Magpie-larks were not frequent but a few birds were present on the townsite and on the Railway Dam catchment. Young birds left a nest, completed during the first week in September, on or about October 18, but I saw young being fed at another nest as early as August 25. This brood was successful and the same nest was used for a second brood which was reported to be on the wing early in November. A third nest was occupied on August 31. The first nest was in the same tree as nests of the Black-and-white Fantail and Black-faced Cuckoo-Shrike and was only 15 yards from the nest of a Frogmouth in an adjacent tree. The second nest was also in the same tree as that of a Black-and-white Fantail.

Crested Bell-bird (*Oreocica gutturalis*).—These proved fairly frequent on heathland. During periods of extreme heat a bird was several times observed sheltering under our house with wings half raised and bill open. I found bell-birds decidedly more vocal after rain than at other times.

Black-faced Cuckoo-Shrike (*Coracina novae-hollandiae*).—The number of Cuckoo-Shrikes present fluctuated. From July to October 1947 the number of birds present was relatively high. There was probably a similar but much less marked increase in 1948. Breeding was observed in September and October. See W.A. Nat., vol. 1, p. 87, for breeding details.

Southern Scrub-Robin (*Drymodes brunneopygia*).—This species was noted on only eight occasions.

White-browed Babbler (*Pomatostomus superciliosus*).—Flocks appeared occasionally on the heathland, often remaining in the same area for some weeks. No nests were observed.

White-fronted Chat (*Epthianura albifrons*).—This species was definitely identified on only four occasions.

Western Warbler (*Gerygone fusca*).—Western Warblers were present from June to September 1947 and from late April until September 1948 on the Railway Dam catchment. On October 3, 1948 I heard the call of this species on heathland.

Weebill (*Smierornis brevirostris*).—This species is probably closely associated with the eucalypts. It was not, however, confined to the trees on the Railway Dam catchment, but occurred also on the heath where mallees were present. An occupied nest was noted on August 24, 1947.

Brown Thornbill (*Acanthiza pusilla*).—This was one of the most frequent species on heathland. Breeding apparently took place during July and August, but my evidence on this point is rather fragmentary.

Chestnut-tailed Thornbill (*Acanthiza uropygialis*).—These Thornbills occurred both on heath and in forest.

Yellow-tailed Thornbill (*Acanthiza chrysorrhoa*).—This species was recorded on the Railway Dam catchment and on the townsite, but it appears to avoid the heathland.

Redthroat (*Pyrholaemus brunneus*).—Redthroats were much more frequent at Caron than in any other locality that I have examined.

Shy Ground-Wren (*Hylacola pyrrhopygia*).—Noted on only three occasions, twice in the same locality.

Striated Field-Wren (*Calamanthus fuliginosus*).—Probably quite frequent on heathland, but not often observed except when calling from a bush top.

Brown Song-Lark (*Cinclorhamphus cruralis*).—Present in a wheat crop adjacent to the townsite during August, September and perhaps October 1947.

Bluc-and-white Wren (*Malurus cyanotus*).—Reecorded occasionally in a paddock reverting to heathland. I saw a fully plumaged cock only once—in July 1947.

Masked Wood-Swallow (*Artamus personatus*).—One flock only was observed. See W.A. Nat., vol. 2, p. 141.

Black-faced Wood-Swallow (*Artamus melanops*).—Individuals, pairs and small flocks were seen from time to time, but the species was not frequent.

Red-tipped Pardalote (*Pardalotus substriatus*).—I did not record this species until May 17, 1947, on which occasion I encountered several—there were perhaps as many as 20—loosely associated with other small birds. Thereafter I encountered the species occasionally on the Railway Dam catchment, but not in summer—November to mid-March. If the birds call little during summer they could be easily overlooked, but I am inclined to suspect a migratory movement.

Brown-headed Honeyeater (*Melithreptus brevirostris*).—Flocks were noted very occasionally on heathland and somewhat more frequently on the Railway Dam catchment.

Tawny-crowned Honeyeater (*Gliciphila melanops*).—These birds appeared on heathland early in May 1947 and remained in force until September. A few birds appeared in May 1948. The number increased in July but the birds disappeared early in September. I discovered no nests but the behaviour of certain birds led me to suspect breeding. See W.A. Nat., vol. 2, pp. 30-33, for information, obtained at Caron, on the food-plants of this and other honeyeaters.

White-fronted Honeyeater (*Gliciphila albifrons*).—This, like the preceding species appeared in May 1947, but although numbers declined sharply in mid-November, odd birds were recorded until the following September, when numbers again increased. Birds, apparently juvenile, were noted in November and December 1947.

Brown Honeyeater (*Gliciphila indistincta*).—Brown Honeyeaters were present from June to November 1947 and from May to October 1948.

Singing Honeyeater (*Meliphaga virescens*).—In October 1947, I noted two birds of this species indulging in some form of display. Unusual calls attracted my attention to a chasing flight. Both birds flew to a bush and perched facing one another. The birds then began to peek at each other's throats. This peeking was a swift, rhythmic alternation continued until each bird had peeked, say, 15 times, when the pursuit flight was resumed. There was no apparent animosity between the birds.

White-eared Honeyeater (*Meliphaga leucotis*).—A few birds were usually present on the Railway Dam catchment area.

Yellow-fronted Honeyeater (*Meliphaga plumula*).—This species was definitely identified only once—on August 8, 1948, when one, perhaps two, birds were encountered.

Yellow-throated Miner (*Myzantha flavigula*).—A flock of miners on the townsite comprised at least 20 birds. There were two flocks on the Railway Dam catchment area conservatively estimated at 20 and 30 birds respectively. I twice found miners nest building in mid-July and in four cases young were on the wing about the end of August. However, I observed another nest in which the young hatched on or about October 25—possibly a second brood.

Red Wattle-bird (*Anthochaera carunculata*).—On July 12, 1948 while observing one bird perched in a grevillea, a flock of seven other Wattle-birds flew by. One of these joined the bird on the bush which fanned its tail and half raised its wings. The new arrival then threw back its head and uttered the loud, clear "quoek" note of the species. This sequence was repeated three times. Some form of greeting ceremony appears possible. A nest located on September 6, 1948 contained two eggs and one located on October 12, 1947 contained two eggs, one of which hatched on or about October 19.

Spiny-checked Honeyeater (*Acanthagenys rufogularis*).—The number of birds in the vicinity fluctuated considerably. None was recorded until September 7, 1947, but on February 22, 1948, I noted 25 of these birds while traversing the Railway Dam catchment area. A fortnight later I made a similar traverse without locating a single bird.

Australian Pipit (*Anthus novae-zeelandiae*).—Pipits were noted from time to time in the Caron railway yard and on cultivations, but only rarely in undeveloped areas.

Zebra Finch (*Taeniopygia castanotis*).—Small parties of up to 10 birds were noted occasionally.

"Crow" (*Corvus* sp.).—The local "crow" was not identified to my satisfaction. *C. coronoides* is probably the common species. Breeding was observed in August-September 1947.

Grey Currawong (*Strepera versicolor*).—Currawongs were not frequent but were occasionally noted near the townsite and in both 1947 and 1948 bred on the Railway Dam catchment area during September and October.

Grey Butcher-bird (*Cracticus torquatus*).—I believe that there were usually several Grey Butcher-birds in the vicinity of Caron, but individuals were not often sighted.

Pied Butcher-bird (*Cracticus nigrogularis*).—These birds proved quite frequent. A nest with three eggs was located in August 1947 and a nest with young in mid-October. This is probably the more frequent of the two butcher-birds at Caron.

Western Magpie (*Gymnorhina dorsalis*).—Four or five flocks were located within a mile of the town. Breeding took place in the August-October period.

FROM FIELD AND STUDY

Orchids in Dry Country.—Orchids are usually associated with areas of sure rainfall and their occurrence further inland is always a matter of interest. The following note records two species east of Southern Cross. On July 30, 1952, while travelling on the Great Eastern Highway, we stopped at "The Rock," a vast granite outcrop near the road about 310 miles east of Perth. In the mosses at the base were growing many leaves of *Spieulea eiliata*, a plant which flowers after the leaves disappear. As we could not be positive of their identity we took sods of the moss with the orchid leaves, and the plants flowered in October. Growing with these orchids and in most of the moss-beds from the base to the summit were innumerable rosettes of a tiny Greenhood (*Pterostylis* sp.), while near the top of the rock in a narrow crevice was found an extensive colony of flowering Donkey Orchids (*Diuris longifolia*) of small stature.

—(Mrs.) RICA ERICKSON, "Fairlea," Bolgart.

Land-birds of Garden Island.—These notes may be useful for comparative purposes, following the note by Ken Buller (*W.A. Nat.*, vol. 2, 1949, p. 48). The observations were made during a visit to the island on March 27, 1953. Rock Dove (*Columba livia*).—Fairly numerous; the species is now feral on the island. Indian Turtledove (*Streptopelia chinensis*).—One seen. Senegal Turtledove (*S. senegalensis*).—Four observed. Kestrel (*Falco tinnunculus*).—One seen. Sacred Kingfisher (*Halcyon sanctus*).—One seen at the northern end of the island. Welcome Swallow (*Hirundo neoxena*).—Common. Tree-Martin (*Hyolochelidon nigricans*).—Two seen. Willy Wagtail (*Rhipidura leucophrys*).—Eight noted. Grey Fantail (*R. fuliginosa*).—Seven seen. Golden Whistler (*Pachycephala pectoralis*).—Several birds observed, in both male and female plumage; others were calling but were not seen. Western Warbler (*Gerygone fusca*).—Two seen; these were singing as were three other individuals not located. Western Silvereye (*Zosterops australasiae*).—The commonest bird on the island. Singing Honeyeater (*Meliphaga virens*).—One seen. Australian Pipit (*Anthus novaeseelandiae*).—One seen. Grey Butcher-bird (*Cracticus torquatus*).—Two seen, both giving the typical rollicking laugh-like call. Western Magpie (*Gymnorhina dorsalis*).—A party observed near the post office.

—D. N. CALDERWOOD, Beacon.